

## **EFFECTIVENESS OF PEDAGOGICAL METHODS FOR DEVELOPING ECOLOGICAL COMPETENCIES AMONG UNIVERSITY STUDENTS IN BIOLOGY EDUCATION**

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### **ABSTRACT**

This article analyzes the pedagogical foundations for developing students' ecological competencies in the process of biology education, as well as the effectiveness of modern educational methods. The study highlights the content of environmental education, the role of biology in fostering an ecological culture, and the didactic potential of a competency-based approach. It also provides a scientific and pedagogical justification for the impact of using the comparative method, problem-based learning, project-based activities, observation, and interactive methods on the development of students' ecological knowledge, skills, and competencies. The research employed methods such as the analysis of scientific and pedagogical literature, comparative analysis, observation, generalization, and a systems approach. The findings revealed that applying modern pedagogical methods in biology lessons promotes the development of students' ecological thinking, a conscientious attitude toward nature, and an ecological culture. Based on the research results, scientific and practical recommendations were formulated to enhance the effectiveness of developing ecological competencies within the biological education process.

**Keywords:** Biology education, ecological competence, environmental education, ecological culture, pedagogical methods, competency-based approach, interactive learning, biology lessons, ecological thinking, sustainable development.